

## Section 4-5: Proving Congruence: ASA, AAS

By the end of this lesson, you should be able to answer:

- How do you use the ASA Postulate to test for triangle congruence?
- How do you use the AAS Theorem to test for triangle congruence?

Define the following:

1. Included Side

Postulate 4.3 - Angle-Side-Angle (ASA) Congruence

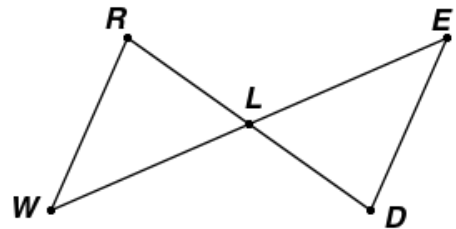
Theorem 4.5 - Angle-Angle-Side (AAS) Congruence

What about Side-Side-Angle (SSA)?

*Example 1:* Prove the following.

**Given:**  $L$  is the midpoint of  $\overline{WE}$ ,  $\overline{WR} \parallel \overline{ED}$

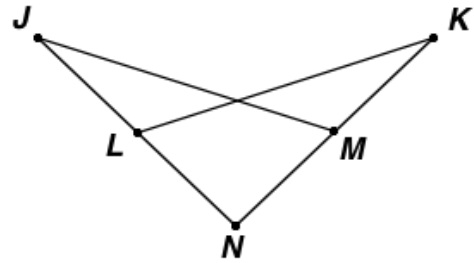
**Prove:**  $\triangle WRL \cong \triangle EDL$



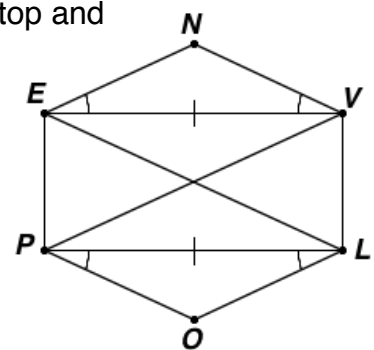
*Example 2:* Prove the following.

**Given:**  $\angle NKL \cong \angle NJM$ ,  $\overline{KL} \cong \overline{JM}$

**Prove:**  $\overline{LN} \cong \overline{MN}$



*Example 3:* On a template design for a certain envelope, the top and bottom flaps are isosceles triangles with congruent bases and base angles. If  $EV = 8$  cm and the height of the isosceles triangle is 3 cm, find  $PO$ .



Problem Set:

"There is only one you... Don't you dare change just because you're outnumbered!" - Charles Swindoll